SEQUENCE LISTING

<110> Iversen, Patrick L.

<120> Sense Antiviral Compound and Method for
     Treating ssRNA Viral Infection

<130> 50450-8055.US00

<140> 10/567,470
<141> 2004-08-06

<150> PCT/US2004/025401
<151> 2004-08-06

<150> US 60/493,990
<151> 2003-08-07

<160> 106

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 40
<212> RNA
<213> St. Louis encephalitis virus

<220>
<221> misc_feature
<222> 36, 37, 38, 39
<223> n = A,T,C or G

<400> 1
gaaaucuguu uccucuccgc ucaccgacgc gaacaunnnc                              40

<210> 2
<211> 40
<212> RNA
<213> Japanese encephalitis virus

<400> 2
caacgauacu aagccaagaa guucacacag auaaacuucu                              40

<210> 3
<211> 40
<212> RNA
<213> Murray Valley encephalitis virus

<400> 3
aaacaauacu gagaucggaa gcucacgcag augaacgucu                              40

<210> 4
<211> 40
<212> RNA
<213> West Nile virus

```
<400> 4
aaacacuacu aaguuuguca gcucacacag gcgaacuacu                                40


<210> 5
<211> 40
<212> RNA
<213> West Nile virus

<400> 5
uugcagacca augcaccuca auuagcacac aggauuuacu                                40


<210> 6
<211> 40
<212> RNA
<213> Dengue type 2 virus

<400> 6
caaagaaucu gucuuugucg guccacguag acuaacaacu                                40


<210> 7
<211> 40
<212> RNA
<213> Hepatitis C virus

<400> 7
gugauucaug guggaguguc gcccccauca gggggcuggc                                40


<210> 8
<211> 40
<212> RNA
<213> Polio virus

<400> 8
gugggccucu ggggugggua caaccccaga gcuguuuaa                                40


<210> 9
<211> 40
<212> RNA
<213> Human enterovirus A

<400> 9
gugggcccug uggguggggua caacccacag gcuguuuaa                                40


<210> 10
<211> 40
<212> RNA
<213> Human enterovirus B

<400> 10
aaugggccug uggguggggaa caacccacag gcuguuuaa                                40


<210> 11
<211> 40
<212> RNA
<213> Human enterovirus C
```

```
<400> 11
gugggccucu ggggugggag caacccaga gcuguuuaa                            40

<210> 12
<211> 40
<212> RNA
<213> Human enterovirus D

<400> 12
gugggccucu ggggugggaa caacccaga gcuguuuaa                            40

<210> 13
<211> 40
<212> RNA
<213> Human enterovirus E

<400> 13
agaguacaac acccaguggg ccuguugggu gggaacacuc                          40

<210> 14
<211> 40
<212> RNA
<213> Bovine enterovirus

<400> 14
gugggcccca ggggugggua caaccccag gcuguuuaa                            40

<210> 15
<211> 40
<212> RNA
<213> Human rhinovirus 89

<400> 15
augggguggag ugagugggaa caacccacuc ccaguuuaa                          40

<210> 16
<211> 40
<212> RNA
<213> Human rhinovirus B

<400> 16
ccauggguc gaauggguggg auacccaucc gcuguuuaa                           40

<210> 17
<211> 40
<212> RNA
<213> Foot-and-mouth disease virus

<400> 17
guuggcgugc uagagaugag acccagugc ccccuuucaa                          40

<210> 18
<211> 40
<212> RNA
<213> Hepatitis A virus

<400> 18
```

3

ccaagaggga cuccggaaau ucccggagac cccucuugaa                    40

<210> 19
<211> 40
<212> RNA
<213> Feline calicivirus

<400> 19
gaagcucaga guuugagaca uugucucaaa uuucuuuuac                    40

<210> 20
<211> 40
<212> RNA
<213> Canine calicivirus

<400> 20
gagcucgaga gagcgauggc agaagccauu ucucauuaac                    40

<210> 21
<211> 40
<212> RNA
<213> Porcine enteric calicivirus

<400> 21
gcccaauagg caacggacgg caauuagcca ucacgaucac                    40

<210> 22
<211> 40
<212> RNA
<213> Calicivirus strain NB

<400> 22
aagaaaagug aaagucacua ucucucuaua auuaaaucac                    40

<210> 23
<211> 40
<212> RNA
<213> Norwalk virus

<400> 23
agcaguagga acgacgucuu uugacgccau caucauucac                    40

<210> 24
<211> 40
<212> RNA
<213> Hepatitis E virus

<400> 24
ugaugccagg agccuuaaua aacugauggg ccuccauggc                    40

<210> 25
<211> 40
<212> RNA
<213> Rubella virus

<400> 25
augggaaugg gaguccuaag cgagguccga uagcuuccau                    40

```
<210> 26
<211> 40
<212> RNA
<213> SARS coronavirus TOR2

<400> 26
agguugguug gcuuuuccug gguagguaaa aaccuaauau                    40

<210> 27
<211> 40
<212> RNA
<213> Porcine epidemic diarrhea virus

<400> 27
aaaagagcua acuauccgua gauagaaaau cuuuuuaagu                    40

<210> 28
<211> 40
<212> RNA
<213> Transmissible gastroenteritis virus

<400> 28
aagagauaua gccacgcuac acucacuuua cuuuaaaagu                    40

<210> 29
<211> 40
<212> RNA
<213> Bovine coronavirus

<400> 29
ucagugaagc gggaugcacg cacgcaaauc gcucgcaauc                    40

<210> 30
<211> 40
<212> RNA
<213> Human coronavirus 229E

<400> 30
aagcaacuuu ucuaucugua gauagauaag guacuuaagu                    40

<210> 31
<211> 40
<212> RNA
<213> Murine hepatitis virus

<400> 31
agaguugaga ggguacguac ggacgccaau cacucuuaua                    40

<210> 32
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer
```

```
<221> misc_feature
<222> 2, 3
<223> n = A,T,C or G

<400> 32
gnngatgttc gcgtcggtga                                              20


<210> 33
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 33
gtcggtgagc ggagaggaaa c                                            21


<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 34
agaagtttat ctgtgtgaac                                              20


<210> 35
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 35
ctgtgtgaac ttcttggctt ag                                           22


<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 36
agacgttcat ctgcgtgagc                                              20


<210> 37
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
```

<223> synthetic oligomer

<400> 37
gttcatctgc gtgagcttcc g                                          21

<210> 38
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 38
agtagttcgc ctgtgtgagc tg                                         22

<210> 39
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 39
gtgagctgac aaacttagta g                                          21

<210> 40
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 40
agtaaatcct gtgtgctaat tg                                         22

<210> 41
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 41
gtgctaattg aggtgcattg                                            20

<210> 42
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 42
agttgttagt ctacgtggac cg                                                    22

<210> 43
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 43
tacgtggacc gacaaagaca g                                                     21

<210> 44
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 44
gccagccccc tgatgg                                                           16

<210> 45
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 45
atgggggcga cactccacca tg                                                    22

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 46
ttaaaacagc tctggggttg                                                       20

<210> 47
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 47
gttgtaccca ccccagagg                                                        19

```
<210> 48
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 48
ttaaaacagc ctgtgggttg                                                    20


<210> 49
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 49
gttgtaccca cccacaggg                                                     19


<210> 50
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 50
ttaaaacagc ctgtgggttg                                                    20


<210> 51
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 51
gttgttccca cccacagg                                                      18


<210> 52
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 52
ttaaaacagc tctggggttg                                                    20


<210> 53
```

```
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 53
gttgctccca ccccagagg                                                    19

<210> 54
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 54
ttaaaacagc tctggggttg                                                   20

<210> 55
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 55
ttgttcccac cccagagg                                                     18

<210> 56
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 56
gagtgttccc acccaacagg                                                   20

<210> 57
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 57
aacaggccca ctgggtgttg                                                   20

<210> 58
<211> 20
<212> DNA
```

<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 58
ttaaaacagc ctgggggttg                                                        20

<210> 59
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 59
gttgtaccca cccctgggg                                                         19

<210> 60
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 60
ttaaaactgg gagtgggttg                                                        20

<210> 61
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 61
gttgttccca ctcactccac                                                        20

<210> 62
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 62
ttaaaacagc ggatgggtat c                                                      21

<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence

```
<220>
<223> synthetic oligomer

<400> 63
gatgggtatc ccaccattcg                                          20

<210> 64
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 64
ttgaaagggg gcactaggg                                           19

<210> 65
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 65
agggtctcat ctctagcacg                                          20

<210> 66
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 66
ttcaagaggg gtctccggg                                           19

<210> 67
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 67
gaatttccgg agtccctctt g                                        21

<210> 68
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer
```

```
<400> 68
gtaaaagaaa tttgagacaa tg                                              22


<210> 69
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 69
gtctcaaact ctgagcttc                                                  19


<210> 70
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 70
gttaatgaga aatggcttct g                                               21


<210> 71
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 71
cttctgccat cgctctctcg ag                                              22


<210> 72
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 72
gtgatcgtga tggctaattg                                                 20


<210> 73
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 73
```

aattgccgtc cgttgcctat tg                                              22

<210> 74
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 74
gtgatttaat tatagagaga tag                                             23

<210> 75
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 75
ttatagagag atagtgactt tc                                              22

<210> 76
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 76
gtgaatgatg atggcgtcaa aag                                             23

<210> 77
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 77
caaaagacgt cgttcctact g                                               21

<210> 78
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 78
gccatggagg cccatcag                                                   18

<210> 79
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 79
atcagtttat taaggctcct gg                                                22

<210> 80
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 80
atggaagcta tcggacctcg                                                   20

<210> 81
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 81
tatcggacct cgcttaggac tc                                                22

<210> 82
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 82
atattaggtt tttacctacc cag                                               23

<210> 83
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 83
acccaggaaa agccaaccaa c                                                 21

<210> 84
<211> 24

```
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 84
acttaaaaag attttctatc tacg                                          24

<210> 85
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 85
ttttctatct acgtacggat ag                                            22

<210> 86
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 86
acttttaaag taaagtgagt g                                             21

<210> 87
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 87
gtaaagtgag tggtagcgtg g                                             21

<210> 88
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 88
gattgcgagc gatttgcgtg cg                                            22

<210> 89
<211> 22
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> synthetic oligomer

<400> 89
gtgcgtgcat cccgcttcac tg                                    22


<210> 90
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 90
cttaagtacc ttatctatct acag                                  24


<210> 91
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 91
tctacagata gaaaagttg                                        19


<210> 92
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 92
tataagagtg attggcgtcc g                                     21


<210> 93
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic oligomer

<400> 93
tccgtacgta ccctctcaac tc                                    22


<210> 94
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
```

<223> target sequence based on virus sequence

<400> 94
agtagttcgc ctgt                                                    14

<210> 95
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 95
ctgacaaact ta                                                      12

<210> 96
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 96
tcgcctgtgt gagc                                                    14

<210> 97
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 97
agtagttcaa actt                                                    14

<210> 98
<211> 13
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 98
agtaaatcct gtg                                                     13

<210> 99
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

```
<400> 99
ctgtgtgcta attg                                                    14


<210> 100
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 100
aatcctgtgt gctaa                                                   15


<210> 101
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 101
agtaaatcaa ttga                                                    14


<210> 102
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 102
taattgaggt gcat                                                    14


<210> 103
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence based on virus sequence

<400> 103
tgggggcgac actc                                                    14


<210> 104
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> scramble control sequence

<400> 104
cgcgacccct gcgatg                                                  16
```

19

```
<210> 105
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> control sequence

<400> 105
agtctcgact tgctacctca                                                      20

<210> 106
<211> 380
<212> RNA
<213> Hepatitis C virus

<400> 106
gccagccccc ugauggggge gacacuccac caugaaucac uccccuguga ggaacuacug          60
ucuucacgca gaaagcgucu agccauggcg uuaguaugag ugucgugcag ccuccaggac         120
cccccuccc gggagagcca uaguggucug cggaaccggu gaguacaccg gaauugccag         180
gacgaccggg uccuuucuug gauaaacccg cucagaugcc uggagauuug ggcgugcccc         240
cgcaagacug cuagccgagu aguguugggu cgcgaaaggc cuugugguac ugccugauag         300
ggugcuugcg agugccccgg gaggucucgu agaccgugca ccaugagcac gaauccuaaa         360
ccucaaagaa aaaccaaacc                                                     380
```

20